We claim

1. Compounds of the general formula (I)

wherein

A represents an aryl or heteroaryl ring,

R¹, R² and R³ independently from each other represent hydrogen, halogen, nitro, cyano, C₁-C₆-alkyl, hydroxy or C₁-C₆-alkoxy, wherein C₁-C₆-alkyl and C₁-C₆-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C₁-C₄-alkoxy,

represents trifluoromethylcarbonyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkenoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- or di-C₁-C₄-alkylaminocarbonyl, C₆-C₁₀-arylaminocarbonyl, arylcarbonyl, heteroarylcarbonyl, heterocyclylcarbonyl, heteroaryl, heterocyclyl or cyano, wherein C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, mono- and di-C₁-C₄-alkylaminocarbonyl can be further substituted with one to three identical or different radicals selected from the group consisting of C₃-C₈-cycloalkyl, hydroxy,

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 C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- and di- C_1 - C_4 -alkylaminocarbonyl, C_1 - C_4 -alkylcarbonyl)- C_1 - C_4 -alkylamino, cyano, amino, mono- and di- C_1 - C_4 -alkylamino, heteroaryl, heterocyclyl and tri- $(C_1$ - C_6 -alkyl)-silyl, and wherein heteroarylcarbonyl, heterocyclylcarbonyl, heteroaryl and heterocyclyl can be further substituted with C_1 - C_4 -alkyl,

R⁵ represents C₁-C₄-alkyl, which can be substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy, C₁-C₆-alkoxy, C₁-C₆-alkenoxy, C₁-C₆-alkylthio, amino, mono- and di-C₁-C₆-alkylamino, arylamino, hydroxycarbonyl, C₁-C₆-alkoxycarbonyl and the radical -O-C₁-C₄-alkyl-O-C₁-C₄-alkyl,

OT

 R^6

R⁵ represents amino,

represents hydrogen, C₁-C₆-alkyl, formyl, aminocarbonyl, mono- or di-C₁-C₄-alkylaminocarbonyl, C₃-C₈-cycloalkylcarbonyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, N-(C₁-C₄-alkylsulfonyl)-aminocarbonyl, N-(C₁-C₄-alkylsulfonyl)-N-(C₁-C₄-alkyl)-aminocarbonyl, heteroaryl, heteroarylcarbonyl or heterocyclylcarbonyl, wherein C₁-C₆-alkyl, mono- and di-C₁-C₄-alkylaminocarbonyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, heteroaryl and heterocyclyl can be substituted with one to three identical or different radicals selected from the group consisting of aryl, heteroaryl, hydroxy, C₁-C₄-alkoxy, hydroxycarbonyl, C₁-C₆-alkoxycarbonyl, aminocarbonyl, mono- and di-C₁-C₄-alkylaminocarbonyl, amino, mono- and di-C₁-C₄-alkylaminocarbonyl, amino, tri-(C₁-C₆-alkyl)-silyl, cyano,

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mono- and di- C_1 - C_4 -alkylamino- C_1 - C_4 -alkylaminocarbonyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkylaminocarbonyl and halogen,

or

5

R⁶ represents a moiety of the formula

wherein

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- R^{6A} is selected from the group consisting of hydrogen and C₁-C₆-alkyl, and
- n represents an integer of 1 or 2,

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R⁷ represents halogen, nitro, cyano, C₁-C₆-alkyl, hydroxy or C₁-C₆-alkoxy, wherein C₁-C₆-alkyl and C₁-C₆-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C₁-C₄-alkoxy,

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and

Y¹, Y², Y³, Y⁴ and Y⁵ independently from each other represent CH or N, wherein the ring contains either 0, 1 or 2 nitrogen atoms,

- and their salts, hydrates and/or solvates and their tautomeric forms.
- 2. Compounds of general formula (I) according to Claim 1, wherein

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- A represents an aryl or heteroaryl ring,
- R¹, R² and R³ independently from each other represent hydrogen, halogen, nitro, cyano, C₁-C₆-alkyl, hydroxy or C₁-C₆-alkoxy, wherein C₁-C₆-alkyl and C₁-C₆-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C₁-C₄-alkoxy,
- R^4 10 represents C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, alkenoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- or di-C₁-C₄-alkylaminocarbonyl, C₆-C₁₀-arylaminocarbonyl, heteroarylcarbonyl, heterocyclylcarbonyl, heteroaryl, heterocyclyl or cyano. wherein C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, mono- and di-15 C₁-C₄-alkylaminocarbonyl can be further substituted with one to three identical or different radicals selected from the group consisting of C₃-C₈-cycloalkyl, hydroxy, C₁-C₄-alkoxy, C₁-C₄-alkoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- and di-C1-C4-alkylaminocarbonyl, C₁-C₄-alkylcarbonylamino, amino, mono- and di-C₁-C₄-20 alkylamino, heteroaryl, heterocyclyl and tri-(C1-C6-alkyl)-silyl,
 - represents C₁-C₄-alkyl, which can be substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy, C₁-C₆-alkoxy, C₁-C₆-alkenoxy, C₁-C₆-alkylthio, amino, mono- and di-C₁-C₆-alkylamino, arylamino, hydroxycarbonyl, C₁-C₆-alkoxycarbonyl and the radical -O-C₁-C₄-alkyl-O-C₁-C₄-alkyl,

or

R⁵ represents amino,

 R^6 represents hydrogen, C1-C6-alkyl, formyl, aminocarbonyl, mono- or di-C₁-C₄-alkylaminocarbonyl, C₃-C₈-cycloalkylcarbonyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, N-(C₁-C₄-alkylsulfonyl)-amino-N-(C₁-C₄-alkylsulfonyl)-N-(C₁-C₄-alkyl)-aminocarbonyl, carbonyl, heteroaryl, heterocyclyl, heteroarylcarbonyl or heterocyclylcarbonyl, wherein C₁-C₆-alkyl, mono- and di-C₁-C₄-alkylaminocarbonyl, C₁-C₆alkylcarbonyl, C1-C6-alkoxycarbonyl, heteroaryl and heterocyclyl can be substituted with one to three identical or different radicals selected from the group consisting of aryl, heteroaryl, hydroxy, C1-C4-alkoxy, hydroxycarbonyl, C1-C6-alkoxycarbonyl, aminocarbonyl, mono- and di-C1-C4-alkylaminocarbonyl, amino, mono- and di-C1-C4-alkylamino, C₁-C₄-alkylcarbonylamino, tri-(C₁-C₆-alkyl)-silyl, cyano, mono- and di-C₁-C₄-alkylamino-C₁-C₄-alkylaminocarbonyl, C₁-C₄alkoxy-C₁-C₄-alkylaminocarbonyl and halogen,

or

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R⁶ represents a moiety of the formula

$*$
 $^{\circ}$ $^{\circ}$

wherein

R^{6A} is selected from the group consisting of hydrogen and C₁-C₆-alkyl, and

n represents an integer of 1 or 2,

R⁷ represents halogen, nitro, cyano, C₁-C₆-alkyl, hydroxy or C₁-C₆-alkoxy, wherein C₁-C₆-alkyl and C₁-C₆-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C₁-C₄-alkoxy,

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and

Y¹, Y², Y³, Y⁴ and Y⁵ independently from each other represent CH or N, wherein the ring contains either 0, 1 or 2 nitrogen atoms.

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- 3. Compounds of general formula (I) according to Claim 1 or 2, wherein
 - A represents a phenyl, naphthyl or pyridyl ring,

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R¹, R² and R³ independently from each other represent hydrogen, fluoro, chloro, bromo, nitro, cyano, methyl, ethyl, trifluoromethyl or trifluoromethoxy,

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represents C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono-C₁-C₄-alkylaminocarbonyl or cyano, wherein C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl and mono-C₁-C₄-alkylaminocarbonyl can be substituted with one to three identical or different radicals selected from the group consisting of C₃-C₈-cycloalkyl, hydroxy, C₁-C₄-alkoxy, C₁-C₄-alkoxycarbonyl, amino, mono- or di-C₁-C₄-alkylamino, heteroaryl and heterocyclyl,

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R⁵ represents methyl or ethyl,

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R⁶ represents hydrogen, C₁-C₆-alkyl, mono- or di-C₁-C₄-alkylamino-carbonyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl or heterocyclylcarbonyl, wherein C₁-C₆-alkyl and C₁-C₆-alkoxycarbonyl can be

substituted with one to three identical or different radicals selected from the group consisting of heteroaryl, hydroxy, C_1 - C_4 -alkoxy, hydroxycarbonyl, C_1 - C_6 -alkoxycarbonyl, aminocarbonyl, mono- and di- C_1 - C_4 -alkylaminocarbonyl, cyano, amino, mono- and di- C_1 - C_4 -alkylamino,

or

R⁶ represents a moiety of the formula

10

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wherein

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R^{6A} is selected from the group consisting of hydrogen and C₁-C₄-alkyl, and

n represents an integer of 1 or 2,

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R⁷ represents halogen, nitro, cyano, trifluoromethyl, trifluoromethoxy, methyl or ethyl,

and

 Y^1 , Y^2 , Y^3 , Y^4 and Y^5 each represent CH.

- 4. Compounds of general formula (I) according to Claim 1, 2 or 3, wherein
 - A represents a phenyl or a pyridyl ring,

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R¹ and R³ each represent hydrogen,

- R² represents fluoro, chloro, bromo, nitro or cyano,
- R⁴ represents cyano, C₁-C₄-alkylcarbonyl or C₁-C₄-alkoxycarbonyl, wherein C₁-C₄-alkoxycarbonyl can be substituted with a radical selected from the group consisting of hydroxy, C₁-C₄-alkoxy, C₁-C₄-alkoxycarbonyl, mono- and di-C₁-C₄-alkylamino, heteroaryl and heterocyclyl,
- R⁵ represents methyl,
- R⁶ represents hydrogen, C₁-C₄-alkyl, mono- or di-C₁-C₄-alkylamino-carbonyl, C₁-C₄-alkylcarbonyl or C₁-C₄-alkoxycarbonyl, wherein C₁-C₄-alkyl and C₁-C₄-alkoxycarbonyl can be substituted with a radical selected from the group consisting of heteroaryl, hydroxy, C₁-C₄-alkoxy, hydroxycarbonyl, aminocarbonyl, mono- and di-C₁-C₄-alkylaminocarbonyl, amino, mono- and di-C₁-C₄-alkylamino.

or

R⁶ represents a moiety of the formula

wherein

R^{6A} is selected from the group consisting of hydrogen and methyl,

25

R⁷ represents trifluoromethyl or nitro,

and

- 5 Y¹, Y², Y³, Y⁴ and Y⁵ each represent CH.
 - 5. Compounds of general formula (I) according to at least one of Claims 1 to 4, wherein A is phenyl or pyridyl.
- 10 6. Compounds of general formula (I) according to at least one of Claims 1 to 5, wherein R¹ is hydrogen.
 - 7. Compounds of general formula (I) according to at least one of Claims 1 to 6, wherein R² is cyano.
 - 8. Compounds of general formula (I) according to at least one of Claims 1 to 7, wherein R³ is hydrogen.
- 9. Compounds of general formula (I) according to at least one of Claims 1 to 8, wherein R⁴ is C₁-C₄-alkoxycarbonyl optionally substituted by hydroxy or wherein R⁴ is C₁-C₄-alkylcarbonyl.
 - 10. Compounds of general formula (I) according to at least one of Claims 1 to 9, wherein R⁵ is methyl.
 - 11. Compounds of general formula (I) according to at least one of Claims 1 to 10, wherein R⁶ is hydrogen.
- 12. Compounds of general formula (I) according to at least one of Claims 1 to 11, wherein R⁷ is trifluoromethyl or nitro.

13. Compounds of general formula (IA)

$$R^{1}$$
 R^{4}
 R^{6}
 R^{3}
 CF_{3}
 $CIA),$

wherein

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Z represents CH or N, and

R¹, R³, R⁴ and R⁶ have the meaning indicated in Claims 1 to 12.

10 14. Process for synthesizing the compounds of general formula (I) or (IA), respectively, as defined in Claims 1 to 13 by condensing compounds of general formula (II)

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wherein

A, R¹ and R² have the meaning indicated in Claims 1 to 13,

with compounds of general formula (III)

wherein

R⁴ and R⁵ have the meaning indicated in Claims 1 to 13,

and compounds of general formula (TV)

$$\begin{array}{c}
NH_2 \\
HN O \\
Y_1^1 \longrightarrow Y_3^5 \\
Y_2^2 \longrightarrow Y_3^3 \longrightarrow Y_4
\end{array} (IV),$$

wherein

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 R^3 , R^7 , and Y^1 to Y^5 have the meaning indicated in Claims 1 to 13,

in the presence of an acid either in a three-component / one-step reaction or sequentially to give compounds of the general formula (IB)

wherein

A, R¹ to R⁵, R⁷, and Y¹ to Y⁵ have the meaning indicated in Claims 1 to 13,

optionally followed by reaction of the compounds of general formula (IB) with compounds of the general formula (V)

 $R^{6*}-X$ (V),

10 wherein

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- R^{6*} has the meaning of R⁶ as indicated in Claims 1 to 13, but does not represent hydrogen, and
- 15 X represents a leaving group, such as halogen, tosylate, mesylate or sulfate,

in the presence of a base.

- 20 15. The composition containing at least one compound of general formula (I) or (IA) as defined in Claims 1 to 13 and a pharmacologically acceptable diluent.
 - 16. A composition according to Claim 15 for the treatment of acute and chronic inflammatory, ischaemic and/or remodelling processes.
 - 17. The process for the preparation of compositions according to Claim 15 and 16 characterized in that the compounds of general formula (I) or (IA) as defined in Claims 1 to 13 together with customary auxiliaries are brought into a suitable application form.

- 18. Use of the compounds of general formula (I) or (IA) as defined in Claims 1 to 13 for the preparation of medicaments.
- 19. Use according to Claim 18 for the preparation of medicaments for the treatment of acute and chronic inflammatory, ischaemic and/or remodelling processes.
 - 20. Use according to Claim 19, wherein the process is chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure.
 - 21. Process for controlling chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure in humans and animals by administration of a neutrophil elastase inhibitory amount of at least one compound according to any of Claims 1 to 13.

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